The Near-Earth Asteroid Tracking (NEAT) Program: New NEOs and the Unusual Object 1996 PW

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The Near-Earth Asteroid Tracking (NEAT) program has produced nearly 6000 detections, of which over half (3200) are new objects, including comet C/1996 E1, 5 Near-Earth Asteroids (NEAs) 1996 EN, 1996 EO, 1996 FQ3, 1996 FR3, 1996 KE, and several Mars-crossers, including 1996 MR, 1996 MS and 1996 PH2. In addition, a dramatically unusual object, 1996 PW, was discovered in August 1996 and determined to have the most eccentric orbit of any known asteroid (e=0.99), an inclination of 29 degrees, and an estimated period of 7000 years. Moving in an highly elongated orbit, 1996 PW, mimics the paths of long-period comets, extending far beyond Neptune and the Kuiper Belt to the outermost region of the Solar System, yet during its closest approach to the sun (q=2.5), no coma or gasous emissions have been detected. Following the tentative announcement of the discovery in the World Wide Web in the Minor Planet Center's NEO Confirmation Page, further observations were made in Italy only twelve hours after the second-night NEAT detection. Early follow-up astrometry and photometry were made by Rabinowitz (see 1996 DPS Abstract), from the Air Force Maui Optical Station (AMOS) and others around the world. 1996 PW will be well-placed in the sky for further observations which will help decipher the nature of this, so far, undefined object: is it a dormant long-period comet or an asteroid?

Related Abstract: Rabinowitz, D., et al. 1996 DPS.....

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Special instructions: We request adjacent poster space with D. Rabinowitz et al. and, if submitted, P. Kervin et al (AMOS). Tue Aug 27 15:56:47 CDT 1996

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